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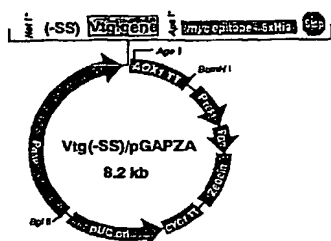
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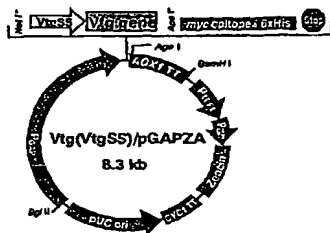
[Continued on next page]

(54) Title: RECOMBINANT VITELLOGENIN ENRICHED FEED

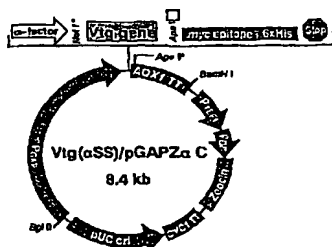
(A)



(B)



(C)



(57) Abstract: The invention provides an expression vector for expression of recombinant vitellogenin in an eukaryotic host. An eukaryotic host, including yeast comprising the expression vector according to the invention may be used as a feed or feed additive for both oviparous and non-oviparous animals, including domesticated animals. A transgenic yeast according to the invention contain increased levels of essential amino acids and fatty acids and may be used as a direct feed or fed to an intermediate live feed such as rotifers or artemias to increase the survival rates of oviparous animal or broodstock.



European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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**Published:**

— *with international search report*

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/SG03/00266

## A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. <sup>7</sup>: C12N 1/19, 15/12, 15/79, 15/81. A23K 1/16, 1/18

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

SEE ELECTRONIC DATABASE BOX BELOW

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SEE ELECTRONIC DATABASE BOX BELOW

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPIDS, CAPLUS, MEDLINE, FSTA: vitellogenin, yolk protein, vector, express?, feed, food, additive, eukaryot?, yeast, nutrition.

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A X	BOWNES, M. et al (2002) " <i>Drosophila</i> yolk protein produced in <i>E. coli</i> is accumulated by mosquito ovaries" <i>Insect Molecular Biology</i> :11(5), 487-496. See entire document	1-36 37
A	GUTIERREZ, M.A. et al (1998) "Comparison of egg-yolk protein hydrolysate and soyabean protein hydrolysate in terms of nitrogen utilization" <i>Br. Journal of Nutrition</i> 80(5), 477-84:abstract only.	1-36
X	YAN, Y-L and POSTLETHWAIT, J.H. (1990) "Vitellogenesis in <i>Drosophila</i> : Sequestration of a Yolk Polypeptide/Invertase Fusion Protein into Developing Oocytes" <i>Developmental Biology</i> :140, 281-90. See entire document	37



Further documents are listed in the continuation of Box C



See patent family annex

\* Special categories of cited documents:  
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 "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  
 "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art  
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